

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Proposed Action: Approve Drilling Permit (Form 22)

Operator: Continental Resources, Inc.

Well Name/Number: June BR 1-5HSL

Location: Lot 1 Section 5 T24N R53E

County: Richland, **MT;** **Field (or Wildcat)** W/C (Bakken Horizontal)

Air Quality

(possible concerns)

Long drilling time: No, 30 to 40 days drilling time.

Unusually deep drilling (high horsepower rig): No, triple derrick (1000HP) drilling rig to drill to 15,836'MD/9323'TVD.

Possible H₂S gas production: Slight

In/near Class I air quality area: No Class I air quality area.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☐ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: No special concerns – using triple rig to drill to 15,836'MD/9323'TVD – 1 horizontal lateral.

Water Quality

(possible concerns)

Salt/oil based mud: Yes, oil based invert drilling fluid on intermediate string hole and brine water on the horizontal lateral. Freshwater and freshwater mud system on surface hole.

High water table: No high water table anticipated.

Surface drainage leads to live water: Yes, nearest drainages are an unnamed ephemeral tributary drainage to Horse Creek ephemeral, about 3/10 of a mile to the northeast and 1/5 of a mile to the southwest and 2/5 of a mile to the southeast from this location. Within the ephemeral drainage to the southeast of this location there is a stock pond.

Water well contamination: No, closest water wells are about 3/5 of a mile to the northwest, 7/10 of a mile to the east and 1 mile to the southwest from this location

Depth of all water wells are 200' or less. Surface casing setting depth is 1300'. Surface hole will be drilled with freshwater and freshwater mud. Steel surface casing will be run and cemented to surface from 1280'.

Porous/permeable soils: No, sandy clay soils.

Class I stream drainage: No Class I stream drainages in the area.

Mitigation:

☒ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

___ Off-site disposal of solids/liquids (in approved facility)

___ Other: _____

Comments: 1280' of surface casing cemented to surface adequate to protect freshwater zones.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No, stream crossings anticipated.

High erosion potential: No, moderate cut, up to 20.4' and moderate fill, up to 15.2', required.

Loss of soil productivity: No, location will be restored after drilling if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, 450'X4000' location size required.

Damage to improvements: Slight, surface use appears to be cultivated land.

Conflict with existing land use/values Slight

Mitigation

___ Avoid improvements (topographic tolerance)

___ Exception location requested

X Stockpile topsoil

___ Stream Crossing Permit (other agency review)

X Reclaim unused part of wellsite if productive

___ Special construction methods to enhance reclamation

X Other: Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be off of an existing county road #201 and existing well access road. A new access road of 61.6' will be built to location. A lined reserve pit will be used to hold drill cuttings and excess drilling fluids. Oil based invert drilling fluids will be recycled after the well is finished drilling. Completion fluids and any free liquids in the reserve pit will be trucked to a Class II Disposal. Cuttings will be allowed to dry in the reserve pit, after drying the cuttings will be buried in the lined reserve pit. No special concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Buildings about 1.2 miles to the northeast and 1.4 miles to the southwest of this location.

Possibility of H2S: Slight

Size of rig/length of drilling time: Triple drilling rig 30 to 40 days drilling time.

Mitigation:

X Proper BOP equipment

___ Topographic sound barriers

___ H2S contingency and/or evacuation plan

___ Special equipment/procedures requirements

___ Other: _____

Comments: Adequate surface casing and operational BOP should mitigate any problems. No concerns.

Wildlife/Recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Listed threatened or endangered Species in Richland County, Piping Plover, Interior Lease Tern, Whooping Crane and Pallid Sturgeon. No species of concern.

Mitigation:

☐ Avoidance (topographic tolerance/exception)

☐ Other agency review (DFWP, federal agencies, DSL)

☐ Screening/fencing of pits, drillsite

☐ Other: _____

Comments: Private cultivated surface lands with no live water within 1/2 of a mile of this location. No concerns

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified.

Mitigation

☐ avoidance (topographic tolerance, location exception)

☐ other agency review (SHPO, DSL, federal agencies)

☐ Other: _____

Comments: On private surface lands. No concerns.

Social/Economic

(possible concerns)

☐ Substantial effect on tax base

☐ Create demand for new governmental services

☐ Population increase or relocation

Comments: No concerns

Remarks or Special Concerns for this site

Well is a 15,836' MD/9,323' TVD Bakken horizontal development well test in Richland County

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): John Gizicki
(title:) Compliance Specialist
Date: March 24, 2014

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Richland County water wells
(subject discussed)
March 24, 2014
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA
COUNTIES, Richland County
(subject discussed)

March 24, 2014
(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____